

CLAIMS

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What is claimed is:

1. A method of linking a set of code modules for execution, comprising:
determining one or more code modules to be executed;
ascertaining a hierarchical order in which the one or more code modules are to
be executed;
loading the one or more code modules to be executed; and
10 building a chain connecting the one or more code modules such that the one or
more code modules will automatically execute in the hierarchical order when a first
one of the one or more code modules is executed.
2. The method as recited in claim 1, wherein building a chain enables the one or
15 more code modules to execute without requiring a parent code module responsible for
calling the one or more code modules.
3. The method as recited in claim 1, wherein the loading step is performed
simultaneous with the building step.
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4. The method as recited in claim 1, wherein building a chain is performed such
that the one or more code modules can be modified without requiring recompilation
of the one or more code modules.
- 25 5. The method as recited in claim 1, wherein loading the one or more code
modules is performed in a reverse order of the hierarchical order.
6. The method as recited in claim 1, wherein determining one or more code
modules to be executed comprises determining one or more code modules to be
30 executed to complete configuration of a hardware interface.

7. The method as recited in claim 1, wherein determining one or more code modules to be executed comprises determining one or more code modules to be executed to configure a hardware device.

5 8. The method as recited in claim 1, wherein the one or more code modules are one or more DLLs.

9. The method as recited in claim 1, wherein the one or more code modules are one or more DLL files.

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10. The method as recited in claim 1, wherein building a chain connecting the one or more code modules comprises:

obtaining a first one of the one or more code modules;

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determining whether the first one of the one or more code modules is to subsequently execute a second one of the one or more code modules upon completion of execution of the first one of the one or more code modules;

when it is determined that the first one of the one or more code modules is to subsequently execute a second one of the one or more code modules, updating a 20 branch table associated with the first one of the one or more code modules to identify an entry point of the second one of the one or more code modules.

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11. The method as recited in claim 1, wherein building a chain connecting the one or more code modules comprises:

obtaining a first one of the one or more code modules;

determining whether the first one of the one or more code modules has an option of executing a second one of the one or more code modules upon completion of execution of the first one of the one or more code modules;

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when it is determined that the first one of the one or more code modules has an option of executing a second one of the one or more code modules, updating a branch table associated with the first one of the one or more code modules to identify an entry point of the second one of the one or more code modules.

12. The method as recited in claim 1, wherein building a chain connecting the one or more code modules comprises:

obtaining a first one of the one or more code modules;

determining whether the first one of the one or more code modules can

5 subsequently execute a second one of the one or more code modules upon completion of execution of the first one of the one or more code modules;

when it is determined that the first one of the one or more code modules can subsequently execute a second one of the one or more code modules, updating a branch table associated with the first one of the one or more code modules to identify

10 an entry point of the second one of the one or more code modules.

13. The method as recited in claim 12, wherein the branch table is included in the first one of the one or more code modules.

15 14. The method as recited in claim 12, wherein updating a branch table includes creating an entry in the branch table that identifies an entry point of the second one of the one or more code modules.

20 15. The method as recited in claim 12, wherein when the first one of the one or more code modules is shared by two or more executable chains of code modules, associating the second one of the one or more code modules with one of the two or more executable chains.

25 16. The method as recited in claim 15, wherein the second one of the one or more code modules is associated with one of the two or more executable chains when a parameter is associated with one of the two or more executable chains.

30 17. The method as recited in claim 12, wherein updating the branch table includes replacing a dummy address with an entry point of the second one of the one or more code modules.

18. The method as recited in claim 1, further comprising associating one of the one or more code modules with a hardware interface to identify a starting point for execution upon occurrence of an interrupt.

19. A method of configuring a hardware device, the hardware device including a hardware interface, comprising

5 determining a configuration of the hardware interface, the configuration corresponding to one or more software modules to be executed to complete the configuration;

10 comparing the configuration against a set of rules that specify a hierarchical order in which the one or more software modules are to be executed in relation to one another;

15 identifying the one or more software modules that are to be executed;

ascertaining the hierarchical order in which the one or more software modules are to be executed;

loading the one or more software modules that are to be executed; and

15 building a chain connecting the one or more software modules such that the one or more software modules will automatically execute in the hierarchical order when a first one of the one or more software modules is executed.

20 20. The method as recited in claim 19, further comprising associating one of the one or more software modules with the hardware interface to identify a starting point for execution upon occurrence of an interrupt.

25 21. The method as recited in claim 19, wherein the hardware device is a router.

22. A computer-readable medium for linking a set of code modules for execution, the computer-readable medium storing computer-readable code, comprising:

instructions for determining one or more code modules to be executed;

instructions for ascertaining a hierarchical order in which the one or more

30 code modules are to be executed;

instructions for loading the one or more code modules to be executed; and

instructions for building a chain connecting the one or more code modules such that the one or more code modules will automatically execute in the hierarchical order when a first one of the one or more code modules is executed.

23. The computer-readable medium as recited in claim 22, wherein the instructions for loading are to be executed simultaneous with the instructions for building the chain.

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24. The computer-readable medium as recited in claim 22, wherein the instructions for building a chain enables the one or more code modules to be modified without requiring recompilation of the one or more code modules.

10 25. A system for linking a set of code modules for execution, comprising:

a processor; and

a memory, the memory storing therein:

instructions for determining one or more code modules to be executed;

instructions for ascertaining a hierarchical order in which the one or

15 more code modules are to be executed;

instructions for loading the one or more code modules to be executed;

and

instructions for building a chain connecting the one or more code

modules such that the one or more code modules will automatically execute in

20 the hierarchical order when a first one of the one or more code modules is

executed.

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